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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,168	01/14/2005	David Roberts McMurtry	122203	9039
25944 7590 12/20/2006 OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320				
			EXAMINER GUADALUPE, YARITZA	
			ART UNIT 2859	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE 3 MONTHS		MAIL DATE 12/20/2006	DELIVERY MODE PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/521,168	<b>Applicant(s)</b> MCMURTRY ET AL.	
	<b>Examiner</b> Yaritza Guadalupe McCall	<b>Art Unit</b> 2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 September 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 23-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-29, 33-36 and 40-44 is/are rejected.
- 7) ☒ Claim(s) 30-32 and 37-39 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

In response to Amendment filed September 28, 2006

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 23 – 29, 34, 36 and 40 - 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Peterlechner et al. ( US 6,612,048 ).

In regards to claim 23, Peterlechner et al. discloses a rotary ring system for use in scale reading apparatus comprising a continuous rotary ring ( 1 ) provided with scale marks on a surface thereof, defining a pattern and readable by a read head ( 7 ) of such apparatus; at least one intermediate member ( 3 ); wherein the at least one intermediate member is fitted between the rotary ring and the part of the machine ( 6 ) on which the rotary ring is mounted.

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Regarding claim 24, Peterlechner et al. also discloses a rotary ring system wherein applying a force ( defined by the force applied to the adjusting device 4, 8, 9 ) to one of the at least one intermediate member and rotary ring secures the rotary ring in place.

With respect to claims 25, 26 and 28, Peterlechner et al. further teaches a rotary ring system wherein the force adjusts the effective radius of the rotary ring, said force is applied to said at least one intermediate member and wherein applying said force to the at least one intermediate member causes deformation of the at least intermediate member.

In regards to claim 27, Peterlechner et al. also shows a rotary ring system wherein the force is an axial force.

Regarding claim 29, Peterlechner et al. teaches a rotary ring system wherein retaining means ( 5, 8, 9 ) are provided to retain the at least one intermediate member on the rotary part of the machine and wherein said force is applied to the said at least one intermediate member by said retaining means.

With regards to claim 34, Peterlechner et al. shows a rotary ring system wherein the intermediate ring system comprises a split ring ( 1 ).

Regarding claim 36, Peterlechner et al. discloses a rotary ring system wherein the at least one intermediate member ( 1 ) is flexible.

In regards to claim 40, Peterlechner et al. discloses a rotary ring system wherein anchor means ( 2, 5 ) are provided to prevent rotation of the rotary ring relative to the part of the machine.

With respect to claim 41, Peterlechner et al. shows a rotary ring system for use in scale reading apparatus comprising a continuous rotary ring ( 1 ) provided with scale marks on a surface thereof defining a pattern and readable by a read head ( 7 ) of such apparatus; at least one intermediate member ( 2, 3 ), wherein the at least one intermediate member is fitted between the rotary ring and the part of the machine on which the rotary ring is mounted; and wherein applying a force to said at least one intermediate member adjusts the effective radius of the rotary ring.

Regarding claim 42, Peterlechner et al further shows a rotary ring system for use in scale reading apparatus comprising a rotary ring ( 1 ) provided with scale marks on a surface thereof defining a pattern and readable by a read head ( 7 ) of such apparatus; at least one intermediate member ( 2, 3 ); wherein the at least one intermediate member is fitted between the rotary ring and the part of the machine on which the rotary ring is mounted; and wherein the at least one intermediate member is compliant.

In regards to claim 43, Peterlechner et al. suggests a rotary ring system wherein the at least one intermediate member is tangentially compliant.

With regards to claim 44, Peterlechner et al. also suggests a rotary ring system wherein anchor means ( 5, 2 ) are provided to prevent rotation of the rotary ring relative to the part of the machine.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 33 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peterlechner et al. ( US 6,612,048 ).

Peterlechner et al. discloses a rotary ring system as recited in paragraph 2 above.

Peterlechner et al. does not disclose the intermediate ring system being a continuous ring as stated in claim 33, or comprising a plurality of segments as stated in claim 35.

With respect to claims 33 and 35 : Peterlechner et al. discloses a rotary ring system comprising a split ring ( 1 and 3 ). The use of the particular type of ring system claimed by applicant, i.e., continuous ring, or a plurality of segments, absent any criticality, is considered to be nothing more than a choice of engineering skill, choice or design because 1) neither non-obvious nor unexpected results, i.e., results which are different in kind and not in degree from the results of the prior art, will be obtained as long as a rotary scale ring is provided, as already suggested by Peterlechner et al., 2) the ring system claimed by Applicant and the ring system used by Peterlechner et al. are well known alternate types of ring systems which will perform the same function, if one is replaced with the other, of providing a rotary scale ring to be detected by the read head, and 3) the use of the particular type of ring system by Applicant is considered to be nothing more than the use of one of numerous and well known alternate types of ring systems that a person having ordinary skill in the art would have been able to provide using routine experimentation in order to provide a rotary ring scale to be detected by a read head as already suggested by Peterlechner et al.

*Allowable Subject Matter*

5. Claims 30 – 32, 37 - 39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Response to Arguments*

6. Applicant's arguments filed September 28, 2006 have been fully considered but they are not persuasive.

Applicant arguments regarding the Peterlechner reference not teaching a “continuous rotary ring” is not persuasive. It is pointed out that “continuous” is defined as “to hold together, uninterrupted extension in space, time or sequence; being of immediate connection; attached together in repeated units”. By these definitions, a chain belt, for example, comprised of multiple loops/links attached together would create a “continuous” belt. Similarly, the rotary ring ( 1 ) disclosed by Peterlechner, once connected as shown in Figure 1, results in a “continuous rotary ring”, since it configures to a closed loop that is uninterrupted at the particular time the connection is being made when mounted as shown in figure 1. Thus, the Peterlechner rotary ring is considered to be “continuous” since it meets the definition of being “of immediate connection; attached together in repeated units”. Therefore, when giving the broadest, yet reasonable, interpretation to the claimed subject matter, the structure shown by Peterlechner clearly fulfills the requirements of a continuous rotary ring, the instant the ends of the ring are attached as shown in Figure 1.



***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

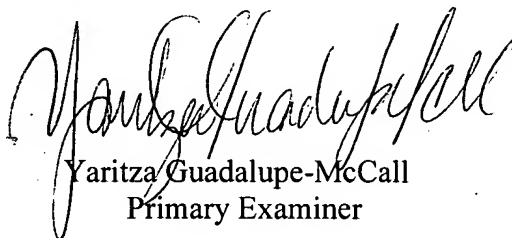
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yaritza Guadalupe McCall whose telephone number is (571)272-2244. The examiner can normally be reached on 8:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F.F. Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

YGM  
December 14, 2006  
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Yaritza Guadalupe-McCall  
Primary Examiner